Texas Instruments Personal Computer

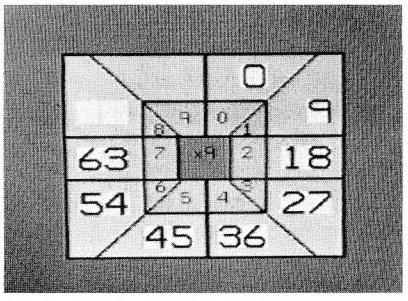
January 1982, No.1

# User's Newsletter

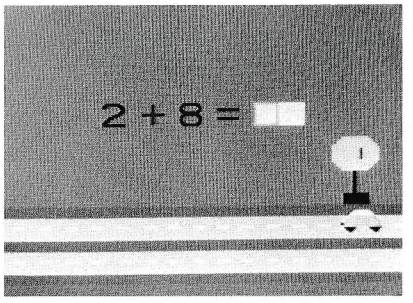
## TI Introduces "Speaking" Math Series

Texas Instruments introduces an innovative Mathematics Courseware Series of *Solid State Software*™ Command Modules developed in conjunction with Scott, Foresman and Company, a leading educational publisher. The first three modules—Addition and Subtraction 1, Addition and Subtraction 2, and Multiplication 1—are geared for the elementary level student. The modules work with or without the Texas Instruments *Solid State Speech*™ Synthesizer (sold separately).

Each module contains activities designed to challenge a child with colorful, interesting practices that include tutorial routines and reinforcing drills. The Addition and Subtraction 1 module begins by teaching the basic concept of counting from zero to nine. Then, the principles of addition and subtraction are introduced using these numbers. The Addition and Subtraction 2 module extends the fundamentals of these skills to include numbers up to 18. The Multiplication 1 module provides practice in the basic multiplication concept for factors zero through nine. The modules present addition, subtraction, and multiplication in both vertical and horizontal formats.



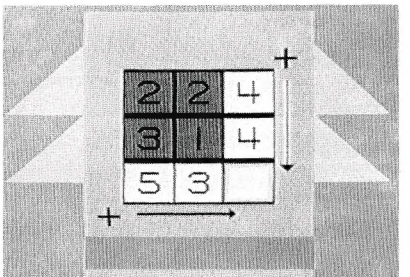

TI's Addition and Subtraction 1 Command Module makes learning addition and subtraction facts for numbers zero through nine fun and challenging. The Speech Synthesizer is optional.




Addition and Subtraction 2 guides a child through the addition and subtraction skills for numbers up to 18 with colorful tutorial routines and reinforcing drills.

The optional Speech Synthesizer adds the feature of computer-generated speech to the color graphics and musical sounds of the computer. The computer's voice then can give directions, read the equations, and encourage the child to "Try again" when he or she gives an incorrect answer. The addition of speech strengthens the learning process since the child can hear, as well as see, the correct answers.

The suggested retail price for Addition and Subtraction 1 (model number PHM 3027), Addition and Subtraction 2 (model number PHM 3028), and Multiplication 1 (model number PHM 3029) is $39.95 per module. The suggested retail price of the Speech Synthesizer is $149.95.




Multiplication 1, developed by TI in conjunction with Scott, Foresman and Company, makes the learning of basic multiplication facts an exciting experience.

## Newest Software Packages from TI

Texas Instruments now adds 11 more software packages to the growing list of applications programs available for the TI-99/4 and TI-99/4A Home Computers.

### Munch Man

Four cunning Hoonos are in pursuit of your Munch Man. Can he make it to an energizer in time to change the attack or will the Hoonos devour him? With the Munch Man *Solid State Software*™ Command Module, you must outmaneuver the Hoonos, as you try to clear the maze by eating all the dots, without being eaten by the Hoonos.

You start the game with three Munch Men, one already in the maze and two in reserve. Four Hoonos are ready to escape from a black cell seconds after the game begins. If your Munch Man is eaten, the maze freezes, returning these tricky Hoonos to the black cell, while another Munch Man appears at the bottom of the maze.

(see NEWEST SOFTWARE, page 2)

# NEWEST SOFTWARE (cont'd)

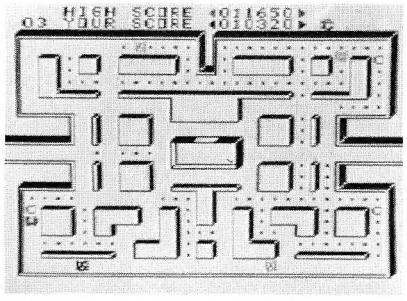
The game offers variety and excitement, challenging your every move. It tests your skill as you try to score points by eating all the dots and by capturing Hoonos while your Munch Man is energized. As you attempt to score these points, you must try to avoid being eaten by the Hoonos.

A one-player game, Munch Man is designed to provide limitless hours of family entertainment. The Command Module (model number PHM 3057) has a suggested retail price of $39.95. The TI Wired Remote Controllers are optional. Munch Man will be available in March, 1982.

**Scott Adams Adventure Games**

Have you ever dreamed of going on an Adventure and facing numerous challenges along the way? Now, with the Adventure Command Module and one of the many cassette- or diskette-based games developed by Adventure International, you can experience many different adventures without leaving the comfort of your home.

To play Adventure, you need both the Adventure Command Module (described in the November issue of the User's Newsletter) and a cassette- or diskette-based Adventure game. In addition to *Pirate Adventure*, the free game included with the module, 10 games are now available in both cassette and diskette versions. *Adventureland* (diskette Model PHD 5046 or cassette Model PHT 6046) begins in the forest of an enchanted world. By exploring this world, you can locate 13 treasures, as well as the special place for storing them to score points. *Mission Impossible* (diskette Model PHD 5047 or cassette Model PHT 6047) starts with a tape recorder in a briefing room. Can you find the mysterious person who just ran out of the room as you try to save the world's first nuclear reactor from destruction?




With TI's exciting new Munch Man arcade game, four cunning Hoonos are in hot pursuit of your Munch Man while he races to an energizer to change the attack.

*Voodoo Castle* (diskette Model PHD 5048 or cassette Model PHT 6048) begins with you in a chapel looking at a closed coffin. You try to find the information necessary to free Count Cristo from the fiendish curse placed on him by his enemies. In *The Count* (diskette Model PHD 5049 or cassette Model PHT 6049) you wake from a nap to find yourself in a strange bed holding a tent stake. Now it's up to you to discover who you are, what you are doing in Transylvania, and why the postman delivered a bottle of blood.

*Strange Odyssey* (diskette Model PHD 5050 or cassette Model PHT 6050) begins as you realize that you are stranded on a small planetoid and must repair your ship before you can go home. As you search the planet for the necessary parts, try to discover the secrets of an ancient civilization, collecting treasures as you go. *Mystery Fun House* (diskette Model PHD 5051 or cassette Model PHT 6051) challenges you to figure out how to get inside before the exploration begins. Once inside, you'll see all the typical Fun House sights which are concealing a valuable prize.

*Pyramid of Doom* (diskette Model PHD 5052 or cassette Model PHT 6052) starts in a desert near a pool of liquid, with a pole sticking out of the sand. As you investigate further, you find a pyramid only recently uncovered by the shifting sands. Find its entrance, collect the treasures, and then try to escape from the pyramid. *Ghost Town* (diskette Model PHD 5053 or cassette Model PHT 6053) contains both treasures and real ghosts. Explore all of the old buildings and the entire area thoroughly to see how many treasures you can locate.

The *Savage Island Series* (diskette Model PHD 5054 or cassette Model PHT 6054) begins on the edge of an impenetrable jungle. As you explore the island in this two-part series, you may meet some very unusual creatures. Either become the world's greatest hero or go to a quick, horrible death. *The Golden Voyage* (diskette Model PHD 5056 or cassette Model PHT 6056) starts with your locating the royal palace in the Persian City. In the palace, you meet an aging king who only has three days to live, unless you can restore his youth. Starting with only a bag of gold, you eventually set sail on a quest for the mythical fountain of youth.

The diskette version of these games has a suggested retail price of $29.95. It requires the Adventure Command Module and the TI Disk Memory System (TI Disk Drive Controller and TI Disk Memory Drive). The cassette version has a suggested retail price of $29.95. It requires the use of the Adventure Command Module, a cassette recorder, and the TI Cassette Interface Cable.

The Personal Computer User's Newsletter is published by the Texas Instruments Personal Computer Division, P.O. Box 53, Lubbock, Texas 79408. All correspondence concerning this newsletter should be mailed to the above address.

Non-TI products are listed in this newsletter for your information. Their inclusion does not represent an endorsement by TI, and lists are not necessarily complete.

# Personal Record Keeping from Texas Instruments

*by Lawrence R. De Rusha, Jr.*

If you are looking for an easy-to-use computerized filing system, Personal Record Keeping from Texas Instruments might be what you need.

**Features**

This software package comes in the form of a 24K ROM module that features a logically ordered procedure for creating, updating and sorting files; calculating simple statistics; and generating reports.

The minimum hardware configuration requires either a 99/4 or 99/4A console with a cassette or disk system. Although it is not required, a printer will help you take full advantage of the report-writing option.

Personal Record Keeping is menu-driven and sorts files or subsets consisting of characters, integers, decimals or scientific notation. You can perform math transformations on any numeric item in a file by using any one of 18 formula options. In addition, Personal Record Keeping lets you analyze any numeric item by evaluating it statistically.

**Performance**

The Personal Record Keeping module achieves what it set out to do. It is a convenient simple filing system that requires no advanced programming knowledge or special training.

The module prompts users through each step of setting up a file structure. A file consists of several pages, each containing up to 15 items. The total number of items and their length determine the number of available pages.

The versatility of the sorting routines is excellent. You can sort any item in a file or selected items on selected pages. Sorts can be according to user-defined parameters or in ascending or descending order.

A sample file of 41 pages with 13 items required over three minutes for a sort in descending order. As the program manual states, "A long list may require a noticeable time to sort."

To accomplish math transformations more complex than the program's formula selections, you use combinations of formulas in a two-step procedure. Since math transformations alter the values of existing file items, you may have to store original data before performing transformations, as the documentation suggests.

You can statistically evaluate any numeric item with a keystroke. Mean, standard deviation, maximum and minimum values are examples of the data you can obtain from this selection.

A linear-fit analysis is also possible with this module. You can substitute any item for x and y.

The size limitations on individual items and on the number of pages are restrictive but are not too severe. The system forces you to be brief, but its flexibility more than compensates.

**Ease of use**

TI's Solid State Software command module is designed to plug into the TI console and makes installation fast and easy. It is designed for nontechnical users who prefer the "snap-and-go" approach to operation.

The program provides a main index for operational selections and includes menus for specific parameters. The program prompts users throughout. These two factors are the key to the simplicity of the system.

**Error handling**

A "beep" alerts you to input errors, and the cursor remains at the error point until you enter acceptable input. In several instances, error messages appear. During numeric operations, for example, the error message "Character Item Unacceptable" appears if you try to enter a character instead of a number.

Power failures are deadly to the Personal Record Keeping Module. You lose all data if power is interrupted, and the program provides no crash recovery.

**Documentation**

The manual is easy to read and well illustrated. It contains a sample to key in and a clear, concise overview of the module's features.

There is one omission from this excellent 48-page manual. The statistical linear-fit analysis is ignored. Those who are unfamiliar with this procedure are on their own with this feature.

Although the documentation doesn't include an index, the table of contents is well delineated. In this case, it works fine as an index.

Overall, the manual is well organized and useful.

**Summary**

Personal Record Keeping is an effective filing system that performs its job well, and its additional features add power to the program and the 99/4.

InfoWorld
Software Report Card

| Personal Record Keeping | Poor | Fair | Good | Excellent |
|---|---|---|---|---|
| Performance | ☐ | ☐ | ☐ | ☐ |
| Documentation | ☐ | ☐ | ☐ | ☐ |
| Ease of Use | ☐ | ☐ | ☐ | ☐ |
| Error Handling | ☐ | ☐ | ☐ | ☐ |

**System Requirements**

- TI 99/4 or 99/4A
- 16K RAM
- One disk drive or cassette recorder
- Printer optional

Price: *$49.95*

*Texas Instruments*
P.O. Box 53
Lubbock, TX 79408

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# International Home Computer Users' Association

Now you can take advantage of an exciting new organization designed to serve the needs of Home Computer users and users' groups. The International Home Computer Users' Association (ICA) is a multi-service, non-profit organization that offers these initial services:

- Information and referrals
- A monthly newsletter
- A biweekly bulletin
- A newsletter exchange
- Special interest group coordination
- Club start up kits and assistance
- An international amateur radio network of computers
- Consumer aid
- Programming assistance
- Hardware and software evaluations
- An annual convention
- A speaker's bureau
- Seminars on the Pascal and assembly languages

As the Association develops, more services will be added.

In the months ahead, an advisory board will be formed, comprised of Users' Group Presidents who will make proposals and suggestions to a full time staff and volunteers located at the Center in San Diego, California.

(see USERS ASSN, page 4)

# You Don't Have To Be Sighted To Use The TI Home Computer!

*by Duane B. Fischer*

Perhaps that claim sounds far fetched, as how can a blind person read the screen? If you equip a TI-99/4 or TI-99/4A with a TI *Solid State Speech* ™ Synthesizer and a Terminal Emulator II *Solid State Software*™ Command Module, it will read the screen aloud. A blind person can pull a BASIC program listing and have it read back in its entirety or as specific lines. The speech option makes this possible and allows totally blind persons to write, read, and edit their own programs without sighted assistance!

You can make the computer into a talking calculator by typing a few program lines. It will read aloud the answer to an equation, thus saving a lot of bead pushing on an abacus. You can alter the pitch and the slope, slow the speaking rate, and alter the vocal inflection by the use of special punctuation and other commands. If you add a TI RS232 Interface and a TI Telephone Coupler (Modem), you can join users on TEXNET℠ service. You can verbally communicate with other users, download programs from other computers, or listen to the Dow Jones averages and United Press International news service, among many others.

I use the speech feature to voice index my diskettes, for a fast verbal directory of names, addresses, and telephone numbers, for examining other programmers' program structure, for rewriting my own programs, for keeping an inventory of products and costs, etc. The limits of its uses are truly determined by the extent of the user's own powers of imagination.

Want a voice listing? Type: LIST"SPEECH" and enter it. If you want a specific line, just type: LIST"SPEECH":100 or for multiple lines LIST"SPEECH":100-120.

The Terminal Emulator II is a fantastic module, and the speech is very intelligible. It takes some getting used to, but it is well worth the effort.

If you have any questions about the speech option, please contact:

Texas Instruments
Incorporated
Consumer Relations
P.O. Box 53
Lubbock, Texas 79408

or me:

Duane Fischer
5028 Merit Drive
Flint, Michigan 48506
(313) 736-3774

℠ TEXNET is a servicemark of Texas Instruments Incorporated.

*Editor's Note*: Duane Fischer is also the Michigan 99/4 Users' Group Co-ordinator.

(USERS ASSN, cont'd)

To participate in the Association, the following affiliated memberships are offered: *Individual/Family*—open to individuals and families for *$40, annually*; *Associated Membership*—open to Users' Groups only for *$55, annually*; *Sponsoring Membership*—open to individuals and other organizations wishing to support the Association for *$250, annually*; *Corporate Membership*—open to all companies wishing to sustain the organization for *$2000, annually*.

Limited services are offered to non-profit, educational organizations without charge through the *Non-Profit Educational Membership*.

Don't be left out. Join ICA.
Fill out this form and mail to
the following address.

International Home Computer Users' Association
P.O. Box 371
Rancho Santa Fe, CA 92067

☐ *Individual Membership* (I don't want to be left out. I want support!)
☐ *Associated Membership* (Users' Groups only. We want support!)
☐ *Sponsoring Membership* (We would like to support the Association!)
☐ *Corporate Membership* (We would like everyone to know that we support the Association!)

Name _____

Address _____

City _____ State _____ Zip _____

Special Interests _____

My payment is enclosed: Check _____ Money Order _____

Checks should be made out to International Home Computer Users' Association.

A membership package will be returned by mail.

# TI Home Computer Users' Groups Continue to Grow

The international scope of TI Home Computer Users' Groups continues to grow. There are now five Users' Groups in Australia and one in Frankfurt, Germany.

These Users' Groups and others around the world are exceedingly helpful in sharing information and ideas.

A complete list of all known Users' Groups follows. If you are interested in starting your own group, write:

Texas Instruments Incorporated
P. O. Box 53
Lubbock, Texas 79408
Attention: Users' Group
Co-ordinator

## INTERNATIONAL USERS' GROUPS

International 99/4 Users' Group
7908 N.W. 23rd St., Suite 5
Bethany, OK 73008

International Home Computer Users' Association
P.O. Box 371
Rancho Santa Fe, CA 92067

### Australia

*National Coordinator:*
Shane Anderson
P.O. Box 101
Kings Croff, Australia 2011

*Sydney Interim Coordinator:*
Brian Lewis
P.O. Box 101
Kings Croff, Australia 2011

*Melbourne Interim Coordinator:*
Doug Thomas
59 Lanstrom Quad
KILSYTH, Vict
Australia 3137

*Brisbane Interim Coordinator:*
Alwyn Smith
42 Palmtree Ave
Scarborough, Qld
Australia 4020

*Perth Interim Coordinator:*
Kevin Newnham
26a-49 Hedsman PD
Wembly, Western Australia 6014

*Tasmania Interim Coordinator:*
Andrew Zagni
161 Carellast, Howrah
Tasmania, Australia 701A

### England

T. I. HOME
Paul Michael Dicks
157 Bishopsford Road
Morden
Surrey
SM4 6BH

### Germany

*Frankfurt:*
American Express International
Dept. 204
Attn: Mr. C. Quigtar
APO NY 09757
0611 152-8262

## LOCAL USERS' GROUPS

### California

*Orange County:*
Chuck Hershey
c/o Daniel Industries, Inc.
1984 Gladwick Street
P.O. Box 6000
Compton, CA 90224
RE: Computer Club
(213) 774-9300

*San Diego:*
San Diego 99/4 Users' Group
Paul Yates
4037 Johnson Drive
Oceanside, CA 92054
(714) 758-4292

### Colorado

Denver 99/4 Users' Group
Rich Savage
CRS Inc.
4860 Ironton, Suite E
Denver, CO 80239
(303) 371-8272

### Illinois

*Chicago:*
Jerome Strauss
353 Park Drive
Palatine, IL 60067
(312) 397-2550

### Michigan

99/4 Users' Group
Duane Fischer
5028 Merit Drive
Flint, MI 48506
(313) 736-3774

### New York

Jerald Greenberg
22 Purchase St.
Rye, NY 10580
(914) 967-8370

Upstate New York 99/4 Users' Group
Paul A. Amodeo, Jr.
7 Steve Lane
Albany, NY 12205

### Ohio

Cin-Day Users' Group
Jim Schwaller
11987 Cedarcreek Dr.
Cincinnati, OH 45240
(513) 825-6645

### Oregon

Pacific Northwest TI 99/4 Users' Group
Gary Kaplan
P.O. Box 5537
Eugene, OR 97405
(503) 485-8796

### Pennsylvania

*Northeast:*
Daniel Cooper
P.O. Box 285
Hazelton, PA 18201
(717) 454-0323

*Pittsburgh:*
Pittsburgh Users' Group
P.O. Box 18124
Pittsburgh, PA 15236

### South Carolina

South Carolina Texas Instruments Computer Club (TIC)
Danny Pack
225 Wychwood Drive
Irmo, SC 29063
(803) 781-6037

### Texas

*Dallas:*
Dallas TI Home Computer Group
Doyle Kelly
P.O. Box 672
Wylie, TX 75098
(214) 995-4068

*Fort Worth:*
Andy Belivacqua
Route 2, Box 75-U
Mansfield, TX 76063
(817) 473-0712

*Houston:*
Houston Users' Group
Raymond Wells
8922 Roos Road
Houston, TX 77036
(713) 771-3483
(713) 871-8000, Ext. 4516

*Lubbock:*
Lubbock Computer Club
99/4 Users' Group
Brett Pijan
2006 43rd St.
Lubbock, TX 79412
(806) 765-0102

*Midland:*
West Texas 99/4 Users' Group
Richard Biddle
P.O. Box 6448, MS 3030
Midland, TX 79701

*Dallas:*
Young Peoples' LOGO Association
1208 Hillsdale Drive
Richardson, TX 75081
(214) 783-7548

### Washington, D. C.

Washington, D. C. 99/4 Users' Group
Bill Whitmore
P.O. Box 267
Leesburg, VA 22075

### Wisconsin

Gene Hitz
"Program Innovators"
2007 North 71st Street
Wauwatosa, WI 53213
(414) 453-0499

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# Personalized Math Program

The following program is an example of how easy it is for you to use a Texas Instruments Home Computer in developing an educational program for your child. This program uses TI's innovative *Solid State Speech*™ technology feature and requires a Terminal Emulator II *Solid State Software*™ Command Module and the TI *Solid State Speech*™ Synthesizer.

```
100 REM  MATH DRILL AND PRACTICE
110 CALL CLEAR
120 OPEN #1:"SPEECH",OUTPUT
130 CALL CHAR(96,"00")
140 CALL COLOR(9,10,10)
150 CALL SCREEN(16)
160 CALL CHAR(104,"00")
170 RANDOMIZE
180 CALL COLOR(10,13,13)
190 TTRY=0
200 TRIGHT=0
210 PRINT #1:"WHAT _IS ^YOUR
 _NAME? "
220 INPUT "WHAT IS YOUR NAME ":N$
280 PRINT #1:"WELCUM TO MY CLASS
FOR^SMART^ CHILDREN _"&N$
290 PRINT #1:"WHAT IS ^YOUR
FAVORITE ^NUMBER _ _"&N$
300 INPUT I
310 N=5
320 CALL CLEAR
330 GOSUB 640
340 REM  I=INT(RND*N)
350 J=INT(RND*N)
360 NTRY=NTRY+1
370 TTRY=TTRY+1
380 IF RND*10<5 THEN 410
390 IF TTRY<3 THEN 410
400 GOSUB 760
410 PRINT " "
420 PRINT I;TAB(6);"+";TAB(9);
J;TAB(15);"=";TAB(18);
430 GOSUB 680
440 IF FLAG=1 THEN 410
450 IF K<>I+J THEN 550
460 TRIGHT=TRIGHT+1
470 CALL HCHAR(23,26,104)
480 PRINT #1:"YOU _ARE^RIGHT_"&N$
490 IF NTRY<3 THEN 340
500 SCORE=(NTRY-NERR)/NTRY
510 IF SCORE<.74 THEN 340
520 N=N+5
530 GOTO 330
540 GOTO 340
550 REM  WRONG ANSWER
560 CALL HCHAR(23,26,96)
570 CALL SOUND(500,-3,0)
580 FOR LOOP=1 TO 300
590 NEXT LOOP
600 PRINT #1:"_NO ^"&N$&" THAT
IS _ _ _WRONG"
610 NERR=NERR+1
620 TTRY=TTRY+1
630 GOTO 420
640 REM  REINIT ERROR COUNT
650 NERR=0
660 NTRY=0
670 RETURN
680 INPUT A$
690 JFLAG=1
700 IF A$="SCORE" THEN 760
710 IF A$="END" THEN 880
720 K=VAL(A$)
730 FLAG=0
740 JFLAG=0
750 RETURN
760 REM  PRINT OUT SCORES
770 YSCORE=TRIGHT/(TTRY-1)*100
780 IF YSCORE>90 THEN 900
790 IF YSCORE>79.9 THEN 920
800 IF YSCORE<80 THEN 940
810 IF JFLAG<>1 THEN 850
820 PRINT "YOUR SCORE IS ";TAB
(16);YSCORE
830 STRY=TTRY-1
840 PRINT "YOU HAVE TRIED ";TAB
(16);STRY;TAB(20);" PROBLEMS"
850 FLAG=1
860 JFLAG=0
870 RETURN
880 GOSUB 760
890 END
900 PRINT #1:"_YOU ARE DOING^
 VERY ^WELL _"&N$
910 GOTO 810
920 PRINT #1:"_YOU ARE ^DOING ^O
 _K BUT ^NEED ^PRACTICE _"&N$
930 GOTO 810
940 PRINT #1:"^OH..._DEAR.  _"&N$
&" ^YOU ^NEED LOTS OF ^PRACT_ESS"
950 PRINT #1:"I HOPE THAT _YOU
WILL ^LET _ME _HELP ^YOU _"&N$
960 GOTO 810
```

Once you have the program keyed in, type RUN and simply follow the instructions given. To find out your score during an exercise, type SCORE when asked for an answer. To end the program, simply type END. The following is a brief description of what each section of the program does.

100-200 initialization of speech, graphics, and variables
210-300 input of name and number
310-450 problem display and input
460-540 correct response routine
550-630 incorrect response routine
640-670 initialization of error counters
680-750 problem input
760-960 display of score and reward messages

# Random Bits

*Editor's Note*: This column presents suggestions and ideas for using the TI-99/4 and TI-99/4A Home Computer and its accessories. We would like to publish your programming problems, solutions, and ideas. Send letters to:

Personal Computer
Newsletter
Texas Instruments
Incorporated
P.O. Box 53
Lubbock, TX 79408
Attn: Editor

### ON-GOTO or ON-GOSUB Statement Correction

If you type an ON-GOTO or ON-GOSUB statement with blanks between the numbers, the statement may not execute properly, even though it looks correct when listed. The solution is to edit the line, retype the first character, and press <ENTER>. This will cause the line to be saved correctly.

Example: the program

```
100 INPUT N
110 ON N GOTO 100,100 ,100
```

The program will work with input of 1 or 2, but will fail on input 3. The line will show in a listing as

```
110 ON N GOTO 100,100,100
```

The statement appears correct, but it will not execute properly.

### Correction on Using Lower-Case Letters on the TI-99/4

Line 30 of the program listed in Random Bits in the November User's Newsletter should read:

```
30 B$="0000" & SEG$(A$,1,4) &
SEG$(A$,7,4) & SEG$(A$,13,4)
```

*Texas Instruments invented the integrated circuit, the microprocessor, and the microcomputer. Being first is our tradition.*